

CLAIMS

1. A method for solving multi-dimensional scientific and engineering design problems requiring solutions for stress, strain and deformation, and which demand the incorporation of a material constitutive equation into the mathematical solution thereof, comprising:

(a) setting up a multi-dimensional, time dependent form of a governing constitutive equation;

(b) mathematically solving for the simplest form of said governing constitutive equation;

(c) Inserting said governing constitutive equation into equations which require the incorporation of a material constitutive equation for solution, and which are then used to solve a particular engineering or scientific problem; and

(d) determining from laboratory tests the form of the governing material dependent, scalar valued, constitutive function for a particular material, and also solving for the values of all the tensor valued independent constant coefficients associated with a particular degree of material symmetry and isotropy.